```
=> b hcaplus
FILE 'HCAPLUS' ENTERED AT 12:00:30 ON 03 JUL 2002
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FILE COVERS 1907 - 3 Jul 2002  VOL 137 ISS 1
FILE LAST UPDATED: 2 Jul 2002  (20020702/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

CAS roles have been modified effective December 16, 2001. Please
check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> d que l32

L1            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  116-14-3 RN perfluoroethylene
L2            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  9002-88-4 " Polyethylene
L3            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  9003-07-0 " Polypropylene
L4            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  25038-59-9 " PET
L5       234175 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4)
L6       135423 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLYAMIDES+NT/CT
L7        41270 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLYCARBONATES+NT/CT
L8       134019 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLYESTERS/CT
L9        21662 SEA FILE=HCAPLUS ABB=ON  PLU=ON  PERFLUOROETHYLENE OR TETRAFLUO
                 ROETHYLENE
L10      127650 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLYPROPYLENE
L11      275007 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLYETHYLENE
L12       11814 SEA FILE=HCAPLUS ABB=ON  PLU=ON  REACT?(3A)(PLATE OR CELL OR
                 WELL)/OBI
L13         868 SEA FILE=HCAPLUS ABB=ON  PLU=ON  MICROPLATE/OBI OR MICRO(A)PLAT
                 E/OBI
L14        1956 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (MICROTITER OR MICROTITRE OR
                 MICRO(A)(TITER OR TITRE))/OBI
L15         206 SEA FILE=HCAPLUS ABB=ON  PLU=ON  96 WELL/OBI
L16        2058 SEA FILE=HCAPLUS ABB=ON  PLU=ON  MEMBRANES, NONBIOLOGICAL+OLD/C
                 T (L) PERMSELECTIVE
L17          60 SEA FILE=HCAPLUS ABB=ON  PLU=ON  MONOFILM OR MONO FILM
L18       18747 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ?PERMEABLE?(2A)(FILM OR
                 MEMBRANE OR LAMINATE)
L31         814 SEA FILE=HCAPLUS ABB=ON  PLU=ON  MULTIWELL OR MULTI WELL
L32           6 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L5 OR L6 OR L7 OR L8 OR L9
                 OR L10 OR L11) AND ((L12 OR L13 OR L14 OR L15) OR L31) AND
                 (L16 OR L17 OR L18)
```

```
=> b wpix

FILE 'WPIX' ENTERED AT 12:00:32 ON 03 JUL 2002
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FILE LAST UPDATED: 01 JUL 2002              <20020701/UP>
MOST RECENT DERWENT UPDATE            200241   <200241/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> The BATCH option for structure searches has been
    enabled in WPINDEX/WPIDS and WPIX  >>>

>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY >>>

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES,
    SEE http://www.derwent.com/dwpi/updates/dwpicov/index.html <<<

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
    PLEASE VISIT:
 http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
    GUIDES, PLEASE VISIT:
    http://www.derwent.com/userguides/dwpi_guide.html <<<

=> d que l50;d que 152

L36      428196 SEA FILE=WPIX ABB=ON  PLU=ON  POLYCARBONATE OR PERFLUOROETHYLEN
                E OR PERFLUORO ETHYLENE OR PER FLUORO ETHYLENE OR PER FLUOROETH
                YLENE OR POLYAMIDE OR TETRAFLUOROETHYLENE OR TETRA FLUORO
                ETHYLENE OR TETRAFLUORO ETHYLENE OR TETRA FLUOROETHYLENE OR
                POLYESTER OR POLYPROPYLENE OR POLYETHYLENE OR PET
L37        8096 SEA FILE=WPIX ABB=ON  PLU=ON  POLY(W)(CARBONATE OR AMIDE OR
                ESTER OR PROPYLENE OR ETHYLENE)
L38         301 SEA FILE=WPIX ABB=ON  PLU=ON  MULTI WELL
L39      822406 SEA FILE=WPIX ABB=ON  PLU=ON  FILM OR MEMBRANE OR LAMINATE
L43        7998 SEA FILE=WPIX ABB=ON  PLU=ON  MICROPLATE OR MICROTITER OR
                MICROTITRE OR MULTIWELL OR 96 WELL OR MICROWELL OR REACT?(3A)(P
                LATE OR WELL) OR MICRO(W)(PLATE OR TITER OR TITRE OR WELL)
L45          34 SEA FILE=WPIX ABB=ON  PLU=ON  (L36 OR L37)(5A)L39 AND (L38 OR
                L43)
L48          14 SEA FILE=WPIX ABB=ON  PLU=ON  L45 AND S/DC
L49          11 SEA FILE=WPIX ABB=ON  PLU=ON  L45 AND J04/DC
L50           9 SEA FILE=WPIX ABB=ON  PLU=ON  L48 AND L49
```

Derwent Codes
S = Instrumentation, Measuring and Testing

J04 = Chem. Eng.: Chemical/Physical Processes/Apparatus

```
L36      428196 SEA FILE=WPIX ABB=ON  PLU=ON  POLYCARBONATE OR PERFLUOROETHYLEN
                E OR PERFLUORO ETHYLENE OR PER FLUORO ETHYLENE OR PER FLUOROETH
                YLENE OR POLYAMIDE OR TETRAFLUOROETHYLENE OR TETRA FLUORO
                ETHYLENE OR TETRAFLUORO ETHYLENE OR TETRA FLUOROETHYLENE OR
                POLYESTER OR POLYPROPYLENE OR POLYETHYLENE OR PET
L37        8096 SEA FILE=WPIX ABB=ON  PLU=ON  POLY(W)(CARBONATE OR AMIDE OR
                ESTER OR PROPYLENE OR ETHYLENE)
L38         301 SEA FILE=WPIX ABB=ON  PLU=ON  MULTI WELL
L39      822406 SEA FILE=WPIX ABB=ON  PLU=ON  FILM OR MEMBRANE OR LAMINATE
```

```
L43        7998 SEA FILE=WPIX ABB=ON  PLU=ON  MICROPLATE OR MICROTITER OR
                MICROTITRE OR MULTIWELL OR 96 WELL OR MICROWELL OR REACT?(3A)(P
                LATE OR WELL) OR MICRO(W)(PLATE OR TITER OR TITRE OR WELL)
L45          34 SEA FILE=WPIX ABB=ON  PLU=ON  (L36 OR L37)(5A)L39 AND (L38 OR
                L43)
L48          14 SEA FILE=WPIX ABB=ON  PLU=ON  L45 AND S/DC
L49          11 SEA FILE=WPIX ABB=ON  PLU=ON  L45 AND J04/DC
L52           2 SEA FILE=WPIX ABB=ON  PLU=ON  (L48 OR L49) AND (MEMBRANES OR
                COMBINATORIAL)/TI


=> s l50 or l52

L113         11 L50 OR L52

=> b jic

FILE 'JICST-EPLUS' ENTERED AT 12:00:37 ON 03 JUL 2002
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FILE COVERS 1985 TO 1 JUL 2002 (20020701/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED
TERM (/CT) THESAURUS RELOAD.

=> d que l59;d que l62

L53       51273 SEA FILE=JICST-EPLUS ABB=ON  PLU=ON  POLYCARBONATE OR PERFLUORO
                ETHYLENE OR PERFLUORO ETHYLENE OR PER FLUORO ETHYLENE OR PER
                FLUOROETHYLENE OR POLYAMIDE OR TETRAFLUOROETHYLENE OR TETRA
                FLUOROETHYLENE OR TETRAFLUORO ETHYLENE OR TETRA FLUOROETHYLENE
                OR POLYESTER OR POLYPROPYLENE OR POLYETHYLENE OR PET
L54        1815 SEA FILE=JICST-EPLUS ABB=ON  PLU=ON  POLY(W)(CARBONATE OR
                AMIDE OR ESTER OR PROPYLENE OR ETHYLENE)
L55        2223 SEA FILE=JICST-EPLUS ABB=ON  PLU=ON  MICROPLATE OR MICROTITER
                OR MICROTITRE OR MULTIWELL OR 96 WELL OR MICROWELL OR REACT?(3A
                )(PLATE OR WELL) OR MICRO(W)(PLATE OR TITER OR TITRE OR WELL)
                OR MULTI WELL
L56      338296 SEA FILE=JICST-EPLUS ABB=ON  PLU=ON  FILM OR MEMBRANE OR
                LAMINATE
L58       18041 SEA FILE=JICST-EPLUS ABB=ON  PLU=ON  CHAMBER
L59           3 SEA FILE=JICST-EPLUS ABB=ON  PLU=ON  (L53 OR L54) AND L55 AND
                L56 AND L58


L55        2223 SEA FILE=JICST-EPLUS ABB=ON  PLU=ON  MICROPLATE OR MICROTITER
                OR MICROTITRE OR MULTIWELL OR 96 WELL OR MICROWELL OR REACT?(3A
                )(PLATE OR WELL) OR MICRO(W)(PLATE OR TITER OR TITRE OR WELL)
                OR MULTI WELL
L56      338296 SEA FILE=JICST-EPLUS ABB=ON  PLU=ON  FILM OR MEMBRANE OR
                LAMINATE
L60        1565 SEA FILE=JICST-EPLUS ABB=ON  PLU=ON  L56(5A)(PERMEABLE OR
                SEMIPERMEABLE)
L61           3 SEA FILE=JICST-EPLUS ABB=ON  PLU=ON  L60 AND L55
L62           1 SEA FILE=JICST-EPLUS ABB=ON  PLU=ON  L61 AND PLATE TYPE
                REACTOR
```

```
=> s l59 or l62

L114          4 L59 OR L62

=> b ceaba

FILE 'CEABA-VTB' ENTERED AT 12:00:40 ON 03 JUL 2002
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FILE LAST UPDATED: 01 JUL 2002      <20020701/UP>
FILE COVERS 1966 TO DATE

=> d que l68

L63        17246 SEA FILE=CEABA-VTB ABB=ON  PLU=ON  POLYCARBONATE OR PERFLUOROET
                 HYLENE OR PERFLUORO ETHYLENE OR PER FLUORO ETHYLENE OR PER
                 FLUOROETHYLENE OR POLYAMIDE OR TETRAFLUOROETHYLENE OR TETRA
                 FLUOROETHYLENE OR TETRAFLUORO ETHYLENE OR TETRA FLUOROETHYLENE
                 OR POLYESTER OR POLYPROPYLENE OR POLYETHYLENE OR PET
L64         1240 SEA FILE=CEABA-VTB ABB=ON  PLU=ON  POLY(W)(CARBONATE OR AMIDE
                 OR ESTER OR PROPYLENE OR ETHYLENE)
L65         1036 SEA FILE=CEABA-VTB ABB=ON  PLU=ON  MICROPLATE OR MICROTITER OR
                 MICROTITRE OR MULTIWELL OR 96 WELL OR MICROWELL OR REACT?(3A)(P
                 LATE OR WELL) OR MICRO(W)(PLATE OR TITER OR TITRE OR WELL) OR
                 MULTI WELL
L66        38416 SEA FILE=CEABA-VTB ABB=ON  PLU=ON  FILM OR MEMBRANE OR
                 LAMINATE
L67            4 SEA FILE=CEABA-VTB ABB=ON  PLU=ON  (L63 OR L64) AND L65 AND
                 L66
L68            1 SEA FILE=CEABA-VTB ABB=ON  PLU=ON  L67 AND BIOREACTOR


=> b scisearch

FILE 'SCISEARCH' ENTERED AT 12:00:42 ON 03 JUL 2002
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FILE COVERS 1974 TO 28 Jun 2002 (20020628/ED)

=> d que l87;d que l95

L78       107053 SEA FILE=SCISEARCH ABB=ON  PLU=ON  POLYCARBONATE OR PERFLUOROET
                 HYLENE OR PERFLUORO ETHYLENE OR PER FLUORO ETHYLENE OR PER
                 FLUOROETHYLENE OR POLYAMIDE OR TETRAFLUOROETHYLENE OR TETRA
                 FLUOROETHYLENE OR TETRAFLUORO ETHYLENE OR TETRA FLUOROETHYLENE
                 OR POLYESTER OR POLYPROPYLENE OR POLYETHYLENE OR PET
L79        18055 SEA FILE=SCISEARCH ABB=ON  PLU=ON  POLY(W)(CARBONATE OR AMIDE
                 OR ESTER OR PROPYLENE OR ETHYLENE)
L80        15034 SEA FILE=SCISEARCH ABB=ON  PLU=ON  MICROPLATE OR MICROTITER OR
                 MICROTITRE OR MULTIWELL OR 96 WELL OR MICROWELL OR REACT?(3A)(P
                 LATE OR WELL) OR MICRO(W)(PLATE OR TITER OR TITRE OR WELL) OR
                 MULTI WELL
L81       735228 SEA FILE=SCISEARCH ABB=ON  PLU=ON  FILM OR MEMBRANE OR
                 LAMINATE
L83           28 SEA FILE=SCISEARCH ABB=ON  PLU=ON  (L78 OR L79)(10A)L81 AND
                 L80
L86         3906 SEA FILE=SCISEARCH ABB=ON  PLU=ON  L81(5A)(PERMEABLE OR
```

```
                SEMIPERMEABLE OR PERMSELECT?)
L87           1 SEA FILE=SCISEARCH ABB=ON  PLU=ON  L83 AND L86


L78      107053 SEA FILE=SCISEARCH ABB=ON  PLU=ON  POLYCARBONATE OR PERFLUOROET
                HYLENE OR PERFLUORO ETHYLENE OR PER FLUORO ETHYLENE OR PER
                FLUOROETHYLENE OR POLYAMIDE OR TETRAFLUOROETHYLENE OR TETRA
                FLUOROETHYLENE OR TETRAFLUORO ETHYLENE OR TETRA FLUOROETHYLENE
                OR POLYESTER OR POLYPROPYLENE OR POLYETHYLENE OR PET
L79       18055 SEA FILE=SCISEARCH ABB=ON  PLU=ON  POLY(W)(CARBONATE OR AMIDE
                OR ESTER OR PROPYLENE OR ETHYLENE)
L80       15034 SEA FILE=SCISEARCH ABB=ON  PLU=ON  MICROPLATE OR MICROTITER OR
                MICROTITRE OR MULTIWELL OR 96 WELL OR MICROWELL OR REACT?(3A)(P
                LATE OR WELL) OR MICRO(W)(PLATE OR TITER OR TITRE OR WELL) OR
                MULTI WELL
L81      735228 SEA FILE=SCISEARCH ABB=ON  PLU=ON  FILM OR MEMBRANE OR
                LAMINATE
L90          23 SEA FILE=SCISEARCH ABB=ON  PLU=ON  (L78 OR L79)(3A)L81 AND L80

L94       24247 SEA FILE=SCISEARCH ABB=ON  PLU=ON  COMBINATOR? OR BIOREACT?
L95           2 SEA FILE=SCISEARCH ABB=ON  PLU=ON  L90 AND L94


=> s l87 or l95

L115          3 L87 OR L95

=> b biosis

FILE 'BIOSIS' ENTERED AT 12:00:46 ON 03 JUL 2002
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 26 June 2002 (20020626/ED)


=> d que l104;d que l109

L96       46758 SEA FILE=BIOSIS ABB=ON  PLU=ON  POLYCARBONATE OR PERFLUOROETHYL
                ENE OR PERFLUORO ETHYLENE OR PER FLUORO ETHYLENE OR PER
                FLUOROETHYLENE OR POLYAMIDE OR TETRAFLUOROETHYLENE OR TETRA
                FLUOROETHYLENE OR TETRAFLUORO ETHYLENE OR TETRA FLUOROETHYLENE
                OR POLYESTER OR POLYPROPYLENE OR POLYETHYLENE OR PET
L97        6197 SEA FILE=BIOSIS ABB=ON  PLU=ON  POLY(W)(CARBONATE OR AMIDE OR
                ESTER ORPROPYLENE OR ETHYLENE)
L98       14776 SEA FILE=BIOSIS ABB=ON  PLU=ON  MICROPLATE OR MICROTITER OR
                MICROTITRE OR MULTIWELL OR 96 WELL OR MICROWELL OR REACT?(3A)(P
                LATE OR WELL) OR MICRO(W)(PLATE OR TITER OR TITRE OR WELL) OR
                MULTI WELL
L99      813023 SEA FILE=BIOSIS ABB=ON  PLU=ON  FILM OR MEMBRANE OR LAMINATE
L101       2876 SEA FILE=BIOSIS ABB=ON  PLU=ON  L99(8A)(L96 OR L97)
L102         23 SEA FILE=BIOSIS ABB=ON  PLU=ON  L101 AND L98
L103       3980 SEA FILE=BIOSIS ABB=ON  PLU=ON  L99(5A)(PERMEABLE OR SEMIPERMEA
                BLE OR PERMSELECT?)
```

```
L104          1 SEA FILE=BIOSIS ABB=ON  PLU=ON  L103 AND L102


L98       14776 SEA FILE=BIOSIS ABB=ON  PLU=ON  MICROPLATE OR MICROTITER OR
                MICROTITRE OR MULTIWELL OR 96 WELL OR MICROWELL OR REACT?(3A)(P
                LATE OR WELL) OR MICRO(W)(PLATE OR TITER OR TITRE OR WELL) OR
                MULTI WELL
L99      813023 SEA FILE=BIOSIS ABB=ON  PLU=ON  FILM OR MEMBRANE OR LAMINATE
L103       3980 SEA FILE=BIOSIS ABB=ON  PLU=ON  L99(5A)(PERMEABLE OR SEMIPERMEA
                BLE OR PERMSELECT?)
L108        711 SEA FILE=BIOSIS ABB=ON  PLU=ON  TRANSWELL
L109          1 SEA FILE=BIOSIS ABB=ON  PLU=ON  L103 AND L98 AND L108


=> s l104 or l109

L116          2 L104 OR L109

=>

  IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> dup rem l114 l32 l116 l68 l115 l113
FILE 'JICST-EPLUS' ENTERED AT 12:04:34 ON 03 JUL 2002
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FILE 'SCISEARCH' ENTERED AT 12:04:34 ON 03 JUL 2002
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FILE 'WPIX' ENTERED AT 12:04:34 ON 03 JUL 2002
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PROCESSING COMPLETED FOR L114
PROCESSING COMPLETED FOR L32
PROCESSING COMPLETED FOR L116
PROCESSING COMPLETED FOR L68
PROCESSING COMPLETED FOR L115
PROCESSING COMPLETED FOR L113
L117         26 DUP REM L114 L32 L116 L68 L115 L113 (1 DUPLICATE REMOVED)

=> d ibib ab 1-26;file home

L117 ANSWER 1 OF 26  HCAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:        2002:449564  HCAPLUS
```

TITLE: Permeable **reactor plate** and method
INVENTOR(S): Cawse, James Norman
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002045843	A2	20020613	WO 2001-US27376	20010830

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-729118 A 20001204

AB A reactor plate for use in combinatorial org. synthesis (COS) comprises a substrate with an array of reaction cells and a **permeable film** covering at least one of the cells to selectively permit transport of a reactant gas into the one cell while preventing transport of a reaction product out of the cell. A method comprises providing a reactor plate comprising a substrate with an array of reaction cells, at least one cell of the array comprising a cavity and a **permeable film** cover and conducting a combinatorial high throughput screening (CHTS) method with the reactor plate. The method is suitable for prepg. an array of catalysts for prodn. of arom. carbonates.

L117 ANSWER 2 OF 26 WPIX (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2002-328171 [36] WPIX
CROSS REFERENCE: 2000-038527 [03]
DOC. NO. NON-CPI: N2002-257440
DOC. NO. CPI: C2002-094756
TITLE: Binding assay for sensing analyte mass in liquid sample, involves immobilizing sorbent zones array comprising analyte binding partner on substrate.
DERWENT CLASS: A89 B04 D16 **J04 S03**
INVENTOR(S): CERCEK, B; DODSON, C L; LIU, Y; OBREMSKI, R J; SILZEL, J W; TSAY, T; WANG, T R; ZHOU, S
PATENT ASSIGNEE(S): (CERC-I) CERCEK B; (DODS-I) DODSON C L; (LIUY-I) LIU Y; (OBRE-I) OBREMSKI R J; (SILZ-I) SILZEL J W; (TSAY-I) TSAY T; (WANG-I) WANG T R; (ZHOU-I) ZHOU S
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2002001853	A1	20020103	(200236)*		21

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

US 2002001853 A1 Provisional US 1997-65937P 19971024
US 1998-63978 19980421

PRIORITY APPLN. INFO: US 1997-65937P 19971024; US 1998-63978 19980421

AB US2002001853 A UPAB: 20020610

NOVELTY - A binding assay, comprising immobilizing sorbent zones array comprising an analyte binding partner on a substrate, is new.

DETAILED DESCRIPTION - A binding assay comprising immobilizing an array on a substrate, is new. The array comprises sorbent zones having an analyte binding partner. A defined volume of sample believed to contain an analyte is contacted with sorbent zones. The analyte binding partner in the sorbent zone is present in excess relative to the analyte, so that any analyte present in the defined volume is depleted from the sample to form an analyte capture complex with the analyte binding partner. The analyte capture is tagged with a fluorescent label. The sorbent zone is illuminated with a laser in the absence of liquid. Fluorescence emissions are detected from any sorbent zone having an analyte capture complex tagged with a fluorescent label, thus determining the analyte mass harvested from the defined volume of sample.

INDEPENDENT CLAIMS are also included for the following:

(1) an analyte binding array for harvesting analyte from a liquid sample; and

(2) a kit for use in a binding assay that senses analyte mass in a liquid sample comprising an analyte binding array and a container comprising labeled binding partner having a fluorescent label and being capable of binding to an analyte bound by an analyte binding partner.

The array comprises sorbent zones immobilized on a substrate. The analyte binding partner is present to deplete the analyte from a sample. The zone is less than 500 micro m in diameter and the sample contains 105-1010 molecules of analyte.

USE - For sensing analyte mass in liquid sample.

ADVANTAGE - The assay has an increased sensitivity for very low quantities of analyte.

DESCRIPTION OF DRAWING(S) - The drawing shows the computed thyroid stimulating hormone (TSH) assay equilibrium for mass assay and ambient analyte assay regimes (an antibody affinity of 10-10 l/mole and a volume of 100 micro l are assumed; the mass assay assumes 1010 binding sites per 100 micro l).

Dwg.1/10

L117 ANSWER 3 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:345260 BIOSIS
DOCUMENT NUMBER: PREV200200345260
TITLE: Activation of human endothelial cells by mobilized porcine leukocytes in vitro: Implications for mixed chimerism in xenotransplantation.
AUTHOR(S): Appel, James Z., III; Newman, Dawn; Awwad, Michel; Gray, Huw S. Kruger; Down, Julian; Cooper, David K. C.; Robson, Simon C. (1)
CORPORATE SOURCE: (1) Center for Immunobiology, Beth Israel Deaconess Medical Center, 99 Brookline Avenue, Room 370, Boston, MA, 02215: srobson@caregroup.harvard.edu USA
SOURCE: Transplantation (Baltimore), (April 27, 2002) Vol. 73, No. 8, pp. 1302-1309. http://www.transplantjournal.com/. print. ISSN: 0041-1337.

DOCUMENT TYPE: Article
LANGUAGE: English

AB Background: The induction of immunologic tolerance to pig antigens in primates may facilitate the development of successful clinical xenotransplantation protocols. The infusion of mobilized porcine peripheral blood leukocytes (PBPC, consisting of approximately 2% peripheral blood progenitor cells) into preconditioned baboons, intended to induce mixed hematopoietic cell chimerism, however, results in a severe thrombotic microangiopathy (TM) that includes vascular injury, microvascular thrombosis, and pronounced thrombocytopenia. Because the mechanisms responsible for TM are unclear, we have explored the effects of PBPC on human umbilical vein endothelial cell (HUVEC) activation. Methods: Confluent HUVEC monolayers were established in **96-well** cell culture clusters. PBPC were mobilized from miniature swine with porcine interleukin 3 (pIL-3), porcine stem cell factor (pSCF), and human granulocyte-colony stimulating factor (hG-CSF) and were collected by leukapheresis. PBPC were added to HUVEC (0-1X107 PBPC/well) for 3- to 24-hr periods and, with cell-based ELISA techniques, surface levels of E-selectin, vascular cell adhesion molecule 1 (VCAM-1), and intercellular adhesion molecule 1 (ICAM-1) were measured. In some cases, peripheral blood leukocytes (PBL) were collected from pigs that did not receive pIL-3, pSCF, or hG-CSF and were added to HUVEC. PBPC were also sorted into subsets of CD2- cells, CD2+ cells, and cellular debris, each of which were added separately to HUVEC. **Transwell permeable membrane** inserts were placed over HUVEC to prevent direct cell-cell contact with PBPC in some instances. Results: PBPC from different pigs (n=6) induced an increase in the expression of E-selectin, VCAM-1, and ICAM-1 to levels 5, 4, and 2 times greater than baseline, respectively. ICAM-1 expression reached maximum levels after the addition of 6X105 PBPC/well. Expression of E-selectin and VCAM-1 increased further with the addition of greater numbers of PBPC, reaching maximum levels after the addition of 1X107 PBPC/well. PBPC-induced up-regulation of E-selectin, VCAM-1, and ICAM-1 had a maximum effect after approximately 6 hr, 12 hr, and 6 to 9 hr, respectively (n=3). The effects of fresh and frozen PBPC on HUVEC were similar (n=2). Compared to PBPC, PBL induced higher levels of E-selectin, VCAM-1, and ICAM-1 on HUVEC (n=2). The addition of CD2- cells to HUVEC induced an increase in E-selectin and VCAM-1 to levels 4 times greater than baseline, whereas the addition of CD2+ cells or debris did not elicit a substantial effect (n=2). **Transwell permeable membranes** prevented PBPC-induced up-regulation of E-selectin, VCAM-1, and ICAM-1 on HUVEC (n=2), suggesting that the mechanism of activation requires direct cell-cell contact. Conclusions: Porcine PBPC activate HUVEC, as suggested by an increase in surface E-selectin, VCAM-1, and ICAM-1 levels, and have a maximum effect after 9 hr. Freezing of PBPC does not affect PBPC-induced activation of HUVEC. PBL induce greater activation of HUVEC than do PBPC. CD2- cells are primarily responsible for PBPC-induced activation of HUVEC and direct cell-cell contact is required. Removal of CD2- cells before the administration of PBPC or the use of agents that interrupt PBPC-endothelial cell interactions may prevent or treat TM in baboons.

L117 ANSWER 4 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:903958 HCAPLUS
DOCUMENT NUMBER: 136:34285
TITLE: **Multi-well** equilibrium dialysis systems
INVENTOR(S): Creasey, Andrew; Shukla, Ashok K.; Shukla, Mukta M.; Shukla, Amita M.

PATENT ASSIGNEE(S): Harvard Bioscience, Inc., USA
SOURCE: PCT Int. Appl., 17 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001093979	A1	20011213	WO 2001-US18070	20010605

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-586985 A 20000605

AB This invention relates to equil. dialysis systems in **multi-well** formats for simultaneously prepg. multiple samples. The equil. dialysis systems are made in well formats of 8, 12, 96, 384, 1536 wells or other **multi-well** formats. Each well (2) includes an upper chamber (8) having an open end, a lower chamber (9) having an open end, and a semi-**permeable membrane** (7) between the upper chamber (8) and the lower chamber (9). The equil. dialysis systems can be used for protein binding assays, mol.-mol. interaction studies, tissue cultures and many other biol. and chem. applications.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L117 ANSWER 5 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:792276 HCAPLUS
DOCUMENT NUMBER: 135:315567
TITLE: Nano-grid micro reactor and methods
INVENTOR(S): Cutler, Thomas A.; Lalonde, Guy; Kelly, Andrew J. G.; Wagstrom, Christopher R.
PATENT ASSIGNEE(S): Glaxo Wellcome Inc., USA
SOURCE: U.S., 18 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6309889	B1	20011030	US 1999-470689	19991223

AB The invention provides exemplary devices and methods to facilitate the performance of assays. In one embodiment, one such device comprises a holding member having a top surface, a bottom surface, and a plurality of holding locations that are adapted to hold at least one article, such as a solid support and/or a cell. When within the holding locations, the articles are preferably disposed below the top surface. A membrane is positioned above the top surface of the holding member, and a pressure

system is provided to apply pos. pressure to the membrane to force the membrane against the top surface of the holding member. In this way, a seal may be provided between the holding locations.
REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L117 ANSWER 6 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:868971 HCAPLUS
DOCUMENT NUMBER: 136:9105
TITLE: Membrane exchange humidifiers for use in humidifying reactant streams for solid polymer electrolyte fuel cell systems
INVENTOR(S): Mossman, Alexander Douglas
PATENT ASSIGNEE(S): Can.
SOURCE: U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U.S. Ser. No. 521,228.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001046616	A1	20011129	US 2001-800751	20010307
WO 2001067533	A2	20010913	WO 2001-CA291	20010308

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-521228 A2 20000308
US 2001-800751 A 20010307

AB A membrane exchange humidifier employs a water **permeable membrane** comprising a microporous polymer and a hydrophilic additive. In operation, the membrane preferably has favorable water transmission properties and resists transmission of reactant gas or other components. The membrane is suitable for use even when permeable in its dry condition to the wet or dry gases in the humidifier, and/or when the wet and dry gases are of different compn. By wetting the membrane, the presence of an amt. of liq. water in the wet gas can reduce gas transmission through the membrane to an acceptable level. The humidifier is useful in fuel cell systems in which a reactant gas supply stream, such as the oxidant supply stream, is humidified primarily using water vapor from a fuel cell reactant exhaust stream. The humidifier is particularly suitable for use in conjunction with solid polymer fuel cell systems. The improved mech. and welding properties of the membrane allow for a simpler humidifier configuration.

L117 ANSWER 7 OF 26 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 2001:895701 SCISEARCH
THE GENUINE ARTICLE: 489LH
TITLE: Microfluidic arrays of fluid-fluid diffusional contacts as detection elements and **combinatorial** tools

AUTHOR: Ismagilov R F; Ng J M K; Kenis P J A; Whitesides G M (Reprint)
CORPORATE SOURCE: Harvard Univ, Dept Chem & Chem Biol, Cambridge, MA 02138 USA (Reprint)
COUNTRY OF AUTHOR: USA
SOURCE: ANALYTICAL CHEMISTRY, (1 NOV 2001) Vol. 73, No. 21, pp. 5207-5213.
Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA.
ISSN: 0003-2700.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 19

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB This paper describes microfluidic systems that can be used to investigate multiple chemical or biochemical interactions in a parallel format. These three-dimensional systems are generated by crossing two sets of microfluidic channels, fabricated in two different layers, at tight angles. Solutions of the reagents are placed in the channels; in different modes of operation, these solutions can be either flowing or stationary-the latter is important when one set of channels is filled with viscous gels with immobilized reagents. At every crossing, the channels are separated either by a single membrane or by a composite separator comprising a membrane, a **microwell**, and a second membrane. These components allow diffusive mass transport and minimize convective transport through the crossing. **Polycarbonate membranes** with 0.1-1-mum vertical pores were used to fabricate the devices. Each crossing of parallel channels serves as an element in which chemical or biochemical interactions can take place; interactions can be detected by monitoring changes in fluorescence and absorbance. These all-organic systems are straightforward to fabricate and to operate and may find applications as portable microanalytical systems and as tools in **combinatorial** research.

L117 ANSWER 8 OF 26 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 2001:322980 SCISEARCH
THE GENUINE ARTICLE: 420KP
TITLE: Comparison of chromatographic and spectroscopic methods used to rank compounds for aqueous solubility
AUTHOR: Pan L (Reprint); Ho Q; Tsutsui K; Takahashi L
CORPORATE SOURCE: Glaxo Wellcome Co, Affymax Res Inst, 3410 Cent Expressway, Santa Clara, CA 95051 USA (Reprint); Glaxo Wellcome Co, Affymax Res Inst, Santa Clara, CA 95051 USA; San Jose State Univ, Dept Chem, San Jose, CA 95192 USA
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF PHARMACEUTICAL SCIENCES, (APR 2001) Vol. 90, No. 4, pp. 521-529.
Publisher: JOHN WILEY & SONS INC, 605 THIRD AVE, NEW YORK, NY 10158-0012 USA.
ISSN: 0022-3549.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 16

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Rapid methods for ranking the solubility of compounds in aqueous media using commercial, **96-well** ultraviolet-visible (UV-vis) and nephelometric plate readers are described. The methods were evaluated using commercially available compounds from a variety of structural

classes as well as a series of structurally related compounds derived from **combinatorial** synthesis. Samples were predissolved in dimethyl sulfoxide (DMSO) and then added to the study solvent to attain a final concentration of DMSO in the aqueous solution of 5%. Comparison of filtration of the samples through nylon and poly(**tetrafluoroethylene**) (PTFE) **membranes** is also described. The solubility of the compounds determined using the UV-vis plate reader in the absorption mode (with samples filtered with the PTFE filter) as well as in the light scattering mode was in good agreement with that determined by high-performance liquid chromatography, with an average correlation of 0.95. Solubility data obtained using a **96-well** nephelometer was also comparable (r(2) = 0.97). The nonequilibrium methods described in this study can be used to rapidly rank compounds from **combinatorial** libraries for solubility and can also give a general assessment of solubility prior to running additional high throughput screens in a drug discovery environment. (C) 2001 Wiley-Liss, Inc. and the American Pharmaceutical Association J Pharm Sci 90:521-529, 2001.

L117 ANSWER 9 OF 26 WPIX (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2000-687462 [67] WPIX
DOC. NO. NON-CPI: N2000-508229
DOC. NO. CPI: C2000-209297
TITLE: New **multi-well** sample processing system, having a matrix member with openings positioned against a plate with multiple openings, used particularly for processing DNA samples.
DERWENT CLASS: B04 D16 **J04 S03**
INVENTOR(S): HEATH, E M; O'BRIEN, D P
PATENT ASSIGNEE(S): (GENT-N) GENTRA SYSTEMS INC
COUNTRY COUNT: 89
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000066267	A1	20001109	(200067)*	EN	21

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2000046767 A 20001117 (200111)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000066267	A1	WO 2000-US11505	20000428
AU 2000046767	A	AU 2000-46767	20000428

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000046767	A Based on	WO 200066267

PRIORITY APPLN. INFO: US 1999-302857 19990430

AB WO 200066267 A UPAB: 20001223
NOVELTY - A novel system for **multi-well** sample processing comprises: (a) a plate having multiple openings; and (b) a matrix member (MM) having multiple openings, each MM opening corresponding to one of the plate openings, the MM positioned against a surface of the plate so that the MM openings align with the plate openings.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1) a system for **multi-well** sample processing comprising: (a) a first plate having multiple openings, the plate having multiple nozzles attached to a bottom surface of the plate, each nozzle corresponding to one of the openings; (b) a MM positioned against the first plate having multiple openings corresponding to the openings of the plate, the MM positionable so that them openings are over the plate openings and surrounding the nozzles; and (c) a second plate having multiple wells corresponding to the openings in the MM and the openings in the first plate, the second plate positionable so that the MM openings are over the plate wells; (2) a system for preventing cross-contamination between nozzles in a plate having multiple nozzles, comprising a MM having multiple openings corresponding to the nozzles of the plate, the MM positionable so that the MM openings surround the nozzles; (3) a **multi-well** sample processing system comprising: (a) a first base plate having multiple wells, each well having an opening on a surface of the base plate; (b) a top plate having multiple openings corresponding to the well openings of the first base plate, each opening running through the top plate from a top surface to a bottom surface, each opening having a nozzle attached at the bottom surface of the plate; (c) a MM positionable against the top plate, the MM having multiple openings corresponding to the nozzles and the openings of the top plate; and (d) a second base plate having multiple wells, each well having an opening on a surface of the base plate corresponding to the top plate nozzles; (4) a method for preventing cross-examination during purification using a **multi-well** plate system comprising: (a) mounting a MM having multiple openings against a first plate having multiple openings corresponding to the openings in the MM; and (b) positioning first plate with the MM attached upon a collection reservoir; (5) a method for purifying a sample in a **multi-well** kit with reduced cross-contamination, comprising: (a) placing a MM having multiple openings between a first plate having multiple corresponding openings and a collection reservoir, the wells having openings corresponding to the openings in the MM and the openings in the first plate; (b) adding a sample to the openings in the first plate; (c) centrifuging the plate assembly; (d) placing the MM between the first plate and a third plate having multiple wells, the wells having openings corresponding to the openings in the MM and the openings in the first plate; (e) adding a second solution to the openings in the first plate; (f) heating the plate assembly; and (g) centrifuging the plate assembly.

USE - The system is used for preventing cross-contamination in a **multi-well** kit that can be used in processing samples, e.g. DNA, RNA, proteins, lipids, carbohydrates, metabolites or environmental elements.

ADVANTAGE - The system is simple to use in multi-tier **multi -well** plates, providing flow-through access to a collection reservoir while still preventing cross-contamination between unsealed nozzles and wells of the flow-through top plate and between wells of the unsealed collection reservoir. Throughout the process of adding solutions, centrifuging, changing base plates, and heating, the MM positioned against the nozzle surface of the flow-through plate effectively prevents any cross-contamination across nozzles or among or between wells.

DESCRIPTION OF DRAWING(S) - The drawing shows an embodiment of a **multi-well** sample processing system;
flow-through top plate 105
top plate opening 106
nozzles 107
matrix member 103
base palte 101
.
Dwg.1/5

L117 ANSWER 10 OF 26 WPIX (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2000-225108 [20] WPIX
DOC. NO. NON-CPI: N2000-168663
DOC. NO. CPI: C2000-068908
TITLE: Surface modification of **microtiter** plates, useful in chemical assays, immunoassays or drug screening assays, comprises forming insoluble polymer film.
DERWENT CLASS: A89 B04 D16 **J04 S03**
INVENTOR(S): GANNA, E; PANASYUK, T; PILETSKA, O; PILETSKY, S; SCHEDLER, U; SERGEYEVA, T; ULBRICHT, M
PATENT ASSIGNEE(S): (POLY-N) POLY-AN GMBH
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19832598	A1	20000309	(200020)*		11
DE 19832598	C2	20020214	(200211)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19832598	A1	DE 1998-19832598	19980709
DE 19832598	C2	DE 1998-19832598	19980709

PRIORITY APPLN. INFO: DE 1998-19832598 19980709
AB DE 19832598 A UPAB: 20000426
NOVELTY - Method for modifying the surface of **microtiter** plates comprises chemical or photochemical grafting, radical or ionic polymerization or polymer crosslinking, including molecular impact polymerization, to form a stable insoluble film that can be used to monitor the formation and/or conversion of substances in solution and/or on the surface of the **microtiter** plate.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) a method for determining the pH of samples by contacting them with the modified **microtiter** plates and measuring the light absorption of the polymer film; (2) a method for determining substances in contact with the modified **microtiter** plates, in which one or more enzymes, receptors, antibodies or cells are immobilized on the polymer surface, comprising measuring the change in the optical properties of the polymer film caused by a protonation/deprotonation or redox redox reaction in the course of the binding and/or catalytic conversion of the substances; (3) an enzyme-linked immunosorbent assay (ELISA) method in which the antibodies, receptors or antigens immobilized on the **microtiter** plate surface are replaced by molecular impact polymers (MIPs); (4) a drug screening method in which the receptors or ligands

immobilized on the **microtiter** plate surface are replaced by MIPs; (5) an ELISA method in which antibodies, receptors or antigens are immobilized on the surface of the modified **microtiter** plates; (6) an assay based on the modified **microtiter** plates in which a change in absorption spectrum (wavelength), radioactivity, fluorescence, phosphorescence, chemiluminescence or bioluminescence is used for quantitative determination; (7) a method for monitoring cell cultures, comprising measuring pH, substrate concentration or metabolite concentration with the modified **microtiter** plates; (8) a method for surface modification of optical elements (fibers or films) by chemical or photochemical grafting, radical or ionic polymerization or polymer crosslinking, including molecular impact polymerization, to form a stable insoluble film that can be used to monitor the formation and/or conversion of substances in solution and/or on the surface of the optical element; and (9) use of the polymer-modified optical elements of (8) in sensors.

USE - The modified **microtiter** plates are useful in: (1) a method for determining the pH of samples by contacting them with the modified **microtiter** plates and measuring the light absorption of the polymer film; (2) a method for determining substances in contact with the modified **microtiter** plates, in which one or more enzymes, receptors, antibodies or cells are immobilized on the polymer surface, comprising measuring the change in the optical properties of the polymer film caused by a protonation/deprotonation or redox redox reaction in the course of the binding and/or catalytic conversion of the substances; (3) an enzyme-linked immunosorbent assay (ELISA) method in which the antibodies, receptors or antigens immobilized on the **microtiter** plate surface are replaced by molecular impact polymers (MIPs); (4) a drug screening method in which the receptors or ligands immobilized on the **microtiter** plate surface are replaced by MIPs; (5) an ELISA method in which antibodies, receptors or antigens are immobilized on the surface of the modified **microtiter** plates; (6) an assay in which a change in absorption spectrum (wavelength), radioactivity, fluorescence, phosphorescence, chemiluminescence or bioluminescence is used for quantitative determination; and (7) a method for monitoring cell cultures, comprising measuring pH, substrate concentration or metabolite concentration with the modified **microtiter** plates.

Dwg.0/4

L117 ANSWER 11 OF 26 JICST-EPlus COPYRIGHT 2002 JST

ACCESSION NUMBER: 1010259798 JICST-EPlus

TITLE: Hydrogen Production by Photosynthetic Bacteria in a Layered Membranes Reactor.

AUTHOR: KONDO TOSHIHIKO; ARAKAWA MASAYASU; HIRAI TOSHIRO WAKAYAMA TATSUKI; MIYAKE JUN

CORPORATE SOURCE: Nippon Telegraph and Telephone Corp. (NTT), Telecommunications Energy Lab., JPN
Natl. Inst. of Bioscience and Human-Technol. Agency of Ind. Sci. and Technol.

SOURCE: Nippon Kagakkai Koen Yokoshu, (2000) vol. 78th, no. 2, pp. 654. Journal Code: S0493A
ISSN: 0285-7626

PUB. COUNTRY: Japan

LANGUAGE: Japanese

STATUS: New

AB We attempt to develop a photobioreactor, which has a novel structure, in order to achieve the improvement of optical efficiency and the continuous hydrogen production in the hydrogen production by photosynthetic bacteria. This reactor is consist of several layers included the suspension of

photosynthetic bacteria and layers included only the medium for hydrogen production. The two kinds of layers are separated by **permeable membranes** and accumulated alternately. The hydrogen production capability of (Rhodobacter sphaeroides) RV in this reactor was evaluated by measuring the hydrogen production rate per irradiation area, and compared with the case of conventional **plate type reactors**. (author abst.)

L117 ANSWER 12 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:344510 HCAPLUS
DOCUMENT NUMBER: 131:41784
TITLE: **Reaction** container for microbial **cell** culture for gene amplification
INVENTOR(S): Nakagawa, Miwa; Oka, Motohiro
PATENT ASSIGNEE(S): Dainippon Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11146784	A2	19990602	JP 1997-318047	19971119

AB Disclosed is a reaction container contg. multiple cells suitable for cultivating cells, transgenic Escherichia coli contg. M13 phage, that carry foreign genes to be replicated and later amplified by PCR. The container is constructed with defined materials which include porous **membranes permeable** to nucleic acids, but not to cells. The container allows simultaneous replication and amplification of multiple genes.

L117 ANSWER 13 OF 26 WPIX (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1999-458046 [38] WPIX
CROSS REFERENCE: 1999-443955 [37]
DOC. NO. NON-CPI: N1999-342626
DOC. NO. CPI: C1999-134426
TITLE: Assay device for filter-based specific-binding assays.
DERWENT CLASS: A96 B04 D16 **J04 S03**
INVENTOR(S): BARNETT, G R; MANNS, R L
PATENT ASSIGNEE(S): (BARN-I) BARNETT G R; (MANN-I) MANNS R L; (PANB-N) PANBIO PTY LTD
COUNTRY COUNT: 84
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9932884	A1	19990701	(199938)*	EN	45
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW					
AU 9916501	A	19990712	(199950)		
EP 1038177	A1	20000927	(200048)	EN	
R: BE DE ES FR GB NL					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9932884	A1	WO 1998-AU1037	19981217
AU 9916501	A	AU 1999-16501	19981217
EP 1038177	A1	EP 1998-960894	19981217
		WO 1998-AU1037	19981217

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9916501	A	Based on	WO 9932884
EP 1038177	A1	Based on	WO 9932884

PRIORITY APPLN. INFO: AU 1997-1034 19971219

AB WO 9932884 A UPAB: 20001001

NOVELTY - An assay apparatus which consists of an upper part (comprising RC) and a lower part (comprising WC) that are releasably attached. The parts are divided by the filter and can be separated to facilitate reading of analyte (I) bound to the filter or present in WC.

DETAILED DESCRIPTION - In an assay apparatus that includes at least one **well** having an inlet, **reaction** chamber (RC), wicking chamber (WC), containing a wicking material, and a filter that separates RC and WC.

INDEPENDENT CLAIMS are also included for the following:

(a) similar apparatus in which the new feature is a system for facilitating formation of a meniscus above the filter;

(b) similar apparatus in which the new feature is a light tube in WC; and

(c) assay methods using this apparatus.

USE - The apparatus is used in filter-based immunoassays (e.g. for detecting antigens, haptens or antibodies), nucleic acid assays, or cell-based receptor binding assays, especially for high throughput screening of combinatorial chemical libraries to identify potential drugs, diagnostic reagents or vaccine components.

ADVANTAGE - The device provides for efficient reading of both bound and unbound analyte.

DESCRIPTION OF DRAWING(S) - Exploded view of a single assay well.

Wicking chamber 15A

Filter, bonded to base of upper component 16B

Upper component 16

Constriction dividing the upper component 19

Incubation chamber 16C

Filter chamber 21

Dwg.3/19

L117 ANSWER 14 OF 26 WPIX (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1999-430127 [36] WPIX

DOC. NO. NON-CPI: N1999-320254

DOC. NO. CPI: C1999-126700

TITLE: Solid phase parallel system for synthesizing chemicals on supports to form a **combinatorial** collection of compounds.

DERWENT CLASS: A96 B04 D16 **S03**

INVENTOR(S): ANTONENKO, V V; CAMPBELL, D A; GAVIN, R M; IDA, S; MUIR,

A; SELICK, H E
PATENT ASSIGNEE(S): (GLAX) GLAXO GROUP LTD
COUNTRY COUNT: 85
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9932219	A1	19990701	(199936)*	EN	8
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW					
AU 9919264	A	19990712	(199950)		
US 6083682	A	20000704	(200036)		
EP 1069940	A1	20010124	(200107)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9932219	A1	WO 1998-US26914	19981217
AU 9919264	A	AU 1999-19264	19981217
US 6083682	A	US 1997-994802	19971219
EP 1069940	A1	EP 1998-964065	19981217
		WO 1998-US26914	19981217

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9919264	A	Based on	WO 9932219
EP 1069940	A1	Based on	WO 9932219

PRIORITY APPLN. INFO: US 1997-994802 19971219
AB WO 9932219 A UPAB: 20010317
NOVELTY - The system uses a number of middle plates (24) each having a two-dimensional array of holes. The middle plates are stacked to receive interleaving sheets of membrane to form a three-dimensional array of **reaction** zones. The middle **plates** are sandwiched between a pair of end plates (28) which have fluid guides (38,40) for selective routing of reagents through the reaction zones.

DETAILED DESCRIPTION - The middle plates form a stack which is rotatable relative to the end plates to align the fluid guides with selected reaction zones. The fluid guides may have a narrowing orifice to control the flow of chemicals through the reaction zones. The fluid guides in one of the end plates may include an array of manifolds, each manifold being aligned with one group of reaction zones when the end plate is in a first orientation, and with a different group when it is in a second orientation. The middle plates may be formed of stainless steel and have a thickness of about 0.005''. The end plates are compressed together, either pneumatically or hydraulically, with sufficient force to isolate reaction zones in each reaction plane from one another by a fluid-tight seal. The membrane sheets may be pre-derivatized with a first building block for synthesizing a library of compounds. A second building block is delivered

to the reaction zones. Those having a common x coordinate value receive the same second building block. A third building block is delivered to the reaction zones, the zones with a common y coordinate being contacted with the same third building block. The library is formed by the reaction of the three building blocks in the different reaction zones. The **membranes** may be of **polypropylene, polyethylene**, polytetrafluoroethylene (PTFE), polyacrylate terpolymer, PTFE polyacrylamide terpolymer or fluoropolymer grafted with styrene, acrylate, or acrylamide. Preferably, the membrane is LCR or a DURAPORE membrane.

An INDEPENDENT CLAIM relates to a system for synthesizing a building block onto a sheet material. A flow plate has at least one elongate aperture. A rod is wrapped in the sheet material, and is then inserted into one of the apertures. A fluid containing the building block is flowed through the aperture.

USE - The system is useful for the synthesis of various organic chemicals in a parallel manner to produce a combinatorial collection of compounds, especially used to identify useful compounds.

ADVANTAGE - The system is simple and efficient and can synthesize a large number of compounds.

DESCRIPTION OF DRAWING(S) - The figure shows a cross-sectional side view of the reaction vessel.

middle plates 24
end plates 28
reaction vessels 30
hole 32
frit 34
solid supports 36
fluid guides 38,40
Dwg.4/25

L117 ANSWER 15 OF 26 WPIX (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1999-094770 [08] WPIX
CROSS REFERENCE: 1997-456731 [42]
DOC. NO. NON-CPI: N1999-068958
DOC. NO. CPI: C1999-027721
TITLE: Thin pliable polymeric film for sealing **microplate** - that will flex or collapse in response to applied differential pressure in the filtration direction along the contour of a well.
DERWENT CLASS: A89 **J04 S03**
INVENTOR(S): LIPSKY, J N; VALUS, R J
PATENT ASSIGNEE(S): (WHAT-N) WHATMAN INC
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5853586	A	19981229	(199908)*		5

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
US 5853586	A	Div ex	US 1996-714760	19960916
			US 1997-854668	19970512

FILING DETAILS:

PATENT NO	KIND		PATENT NO
US 5853586	A	Div ex	US 5665247

PRIORITY APPLN. INFO: US 1996-714760 19960916; US 1997-854668 19970512

AB US 5853586 A UPAB: 19990224

Sealing member (20) comprises a flexible sealing material which, in response to the application of differential pressure, will flex or collapse in the direction of filtration along the contour of each individual well (12). A process maintains a differential pressure constant over a **multi well** microfiltration plate (10) comprising placing the sealing member (20) over the surface of the plate (10) having well openings stretching the sealing member (20) to seal the perimeter of each individual well (12), creating a differential pressure around the plate covered with the seal and filling in media from each occupied well at a rate independent of the filtration rate of any other well while maintaining a constant differential pressure around the plate until filtration in the last well containing media is complete. Preferably the sealing member is a flexible sealing material selected from natural rubber, synthetic rubber or plasticised or unplasticised polymeric materials. Preferably the flexible sealing member comprises latex, silicon rubber polyvinylidene chloride, polyvinyl chloride, **polyethylene**, paraffin **films** or combinations of these.

USE - Thin pliable film for sealing the cells of a **microplate**.

ADVANTAGE - It is simple, effective and economical way of sealing the cells individually, allowing the filtration in each cell to proceed undisturbed by the status of filtration in other cells. The vacuum or pressure level above or below the plate is not affected by completion of the filtration in one or more cells while other cells remain in the filtering status. Filtration in all cells is allowed to proceed individually at its own rate, while a seal is maintained over each individual well or cell. Due to the individual sealing of each well, air breakthrough never occurs. A sample can be maintained in a non-contaminated state in the biomedical sciences (for testing highly sensitive samples). The sealing member affords the operator greater freedom to monitor other aspects of the filtration process without the need to individually seal wells as they empty to maintain the desired pressure differential across the plate.

Dwg.3,4/4

L117 ANSWER 16 OF 26 WPIX (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1998-446091 [38] WPIX
DOC. NO. NON-CPI: N1998-347715
DOC. NO. CPI: C1998-135256
TITLE: A **multi-well** bioassay tray for e.g. pharmaceutical research - comprises a **microplate** covered in a plastic film and perforated with crosswise slits over each well.
DERWENT CLASS: A96 B04 D16 **J04 S03**
INVENTOR(S): ASTLE, T W
PATENT ASSIGNEE(S): (ASTL-I) ASTLE T W
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

US 5789251 A 19980804 (199838)* 9

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5789251	A	US 1994-260719	19940616

PRIORITY APPLN. INFO: US 1994-260719 19940616

AB US 5789251 A UPAB: 19980923
A bioassay apparatus comprises; (a) a **microplate** containing a number of wells; (b) a film layer covering all of the wells so as to prevent liquid in the cells from evaporating; (c) a crosswise pairs of slits in the film over each well so that the tip of a pipette may penetrate the well to add or remove fluid, the film being sufficiently resilient so that when the pipette tips is removed the four flap segments of film formed by the cross slits spring back to their former position and reseal the well. Also claimed is a method of performing a bioassay using the film sealed wells as described above.

Preferably the layer is attached to the **microplate** using a pressure sensitive adhesive. One slit in each well may be same length as the diameter of the well, the other slit length being 75% of the well diameter.The **film** may be **polyester**, 3-4 mil thick.

USE - The bioassay tray is used in biological and pharmaceutical research.

ADVANTAGE - The film prevents evaporation of very small sample volumes (typically 1-5 mml) currently used in research while allowing easy and resealable access to the wells for addition or withdrawal of liquid during analysis procedures.

Dwg.1/5

L117 ANSWER 17 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:721736 HCAPLUS
DOCUMENT NUMBER: 126:4217
TITLE: Method of pretreating viable tissue or cells to be contained within a semipermeable vessel
INVENTOR(S): Weber, Collin J.; Ayers-Price, Jennifer
PATENT ASSIGNEE(S): Emory University, USA
SOURCE: PCT Int. Appl., 68 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9631223	A1	19961010	WO 1996-US4803	19960405
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5795570	A	19980818	US 1995-418953	19950407
CA 2217701	AA	19961010	CA 1996-2217701	19960405
AU 9654459	A1	19961023	AU 1996-54459	19960405
AU 720402	B2	20000601		
EP 822824	A1	19980211	EP 1996-911636	19960405
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

JP 11503170 T2 19990323 JP 1996-530536 19960405
PRIORITY APPLN. INFO.: US 1995-418953 A 19950407
WO 1996-US4803 W 19960405

AB This invention provides a method of pretreating viable tissue or cells, e.g., pancreatic islets, to be contained within a semipermeable vessel which comprises (1) suspending the viable tissue or cells in a soln. comprising a substance capable of forming a gel, e.g., sodium alginate, wherein the soln. is physiol. compatible with the viable tissue or cells and (2) treating the resulting suspension under conditions permitting the substance to form a gel, e.g., by adding Ca2+. The subject invention also provides a method of contg. viable tissue or cells within a semipermeable vessel which comprises pretreating viable tissue or cells according to the aforementioned method. The subject invention also provides a method of transplanting viable tissue or cells from a donor to a subject and a method of transplanting viable tissue or cells from a donor to a subject so as to protect the tissue or cells from destruction by the subject's immune system, each method comprising contg. pretreated viable tissue or cells within a semipermeable vessel. Also provided are pretreated viable tissue or cells and pretreated viable tissue or cells contained within a semipermeable vessel, including pretreated viable tissue or cells contained within a microcapsule. In one example, pancreatic islets were encapsulated and then transplanted into a patient with diabetes mellitus.

L117 ANSWER 18 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
ACCESSION NUMBER: 1996:188034 BIOSIS
DOCUMENT NUMBER: PREV199698744163
TITLE: Quantification of leukocyte migration: Improvement of a method.
AUTHOR(S): Sunder-Plassmann, G.; Hofbauer, R.; Sengoelge, G.; Hoerl, W. H.
CORPORATE SOURCE: Klinische Abt. Nephrologie Dialyse, Universitaetsklinik Innere Med. III, Univ. Vienna, Waehringer Guertel 18-20, 1090 Vienna Austria
SOURCE: Immunological Investigations, (1996) Vol. 25, No. 1-2, pp. 49-63.
ISSN: 0882-0139.
DOCUMENT TYPE: Article
LANGUAGE: English

AB Eighteen different **permeable membrane** supports with and without confluent endothelial cell monolayers were incubated with normal donor derived neutrophils in the upper chambers of a 24 **multiwell** double chamber system. In order to study transmembrane or transendothelial leukocyte migration leukocytes were stimulated by chemoattractants, or endothelial cells were activated by IL-1. After coincubation the membrane supports building the upper chambers were discarded. Using this technique, leukocytes that had migrated into the lower chamber were exposed to the fluorescent dye calcein AM without additional washing or transfer steps. Absolute cell counts were determined computer assisted using dilution series of calcein AM labeled leukocytes as standards. Serial dilutions of neutrophils exposed to calcein AM showed reproducible linear fluorescence intensity, and relative fluorescence intensity correlated significant with cell counts (r-2 = 0.974, p lt 0.0001). Out of 18 membrane supports only one was suitable for our assay set up. Best technical and optical performance was achieved with a **membrane** made of **polyethylene** terephtalate with a pore size of 3 mm at a pore density of 0.8 times 10-6/cm-2. Stimulation of leukocytes or endothelium by FMLP or IL-1 revealed an increase of

transendothelial migration to 7.2 +- 1.8 times 10-5 PMN and 5.1 +- 0.7 times 10-5 PMN respectively if compared with medium (0.6 +- 0.2 times 10-5 PMN). IL-1 induced migration of neutrophils was inhibited by anti IL-1 autoantibodies derived from chronic renal failure patients (IL-1: 100% of PMN migrated, anti IL-1 antibody: 39% of PMN migrated, control antibody: 84% of PMN migrated). In summary, a simple fluorimetric assay was established for the quantification of transmembrane and transendothelial leukocyte migration.

L117 ANSWER 19 OF 26 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 950884222 JICST-EPlus
TITLE: Cytotoxic Evaluation of Dental Cements Using Insert **Chamber** Method.
AUTHOR: ITO RITSUKO; SAWADA NORIHIRO; ARAKI KOJI; SUDA HIDEAKI
CORPORATE SOURCE: Tokyo Medical and Dental Univ., Faculty of Dentistry
SOURCE: Nippon Shika Hozongaku Zasshi (Japanese Journal of Conservative Dentistry), (1995) vol. 38, no. 4, pp. 1048-1056. Journal Code: Y0096A (Fig. 14, Tbl. 2, Ref. 19) ISSN: 0387-2343
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: Japanese
STATUS: New
AB The cytotoxic effects of five dental cements-Super-Bond C & B (Sun Medical), Fuji I (GC), Ketac-cem (ESPE), HY-bond carbocement (SHOFU) and F.H cement (NISSIN)-were investigated in vitro. In this study, cytotoxicities were assayed using AlamarBlue, an oxidation- reduction indicator designed to measure quantitatively the proliferation of the cultured cells from human dental pulp, by both the Insert **Chamber** method and the elution method. The Insert **Chamber** method was used insert **chambers** into **multiwell** plate for producing indirect contact of materials with the cell monolayer at a controlled distance of 1mm. The bottom of **chambers** had uniformly spread 0.4 or 3.0.MU.m pores in a **polycarbonate membrane** . This technique also permitted longitudinal observation of the same material sample from freshly mixed to 168 hours of setting to evaluate time-dependent changes in cytotoxicity. The elution method was to assess for extracts of materials. Water-soluble components of the freshly prepared or set cements after 24, 72 and 168 hours were extracted into the culture medium for 24 hours. The extracts were then diluted with the cell culture medium and tested at final concentrations of 100, 50, 10, 1 and 0.1%. Each extract solution was filtered through a 0.22.MU.m millipore filter. In addition, the cell morphological changes were observed in the elution method. The results were as follows: 1. In the Insert **Chamber** method, HY-bond carbocement was very cytotoxic regardless of experimental periods. F.H cement was slightly toxic until 4 hours after mixing. All the others were not cytotoxic at any time. The data using the **chambers** with 0.4.MU.m porous **membrane** was shown slightly less toxic than those with 3.0.MU.m. 2. In the elution method, HY-bond carbocement had a highly cytotoxic effect at concentrations of 100% and 50% of the extract solution in all experimental periods. (author abst.)

L117 ANSWER 20 OF 26 WPIX (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1993-378648 [48] WPIX
DOC. NO. NON-CPI: N1993-292429
DOC. NO. CPI: C1993-168068
TITLE: **Micro plate** for assays using light

measurements for sample holding wells - comprises upper and lower plates forming wells from transparent polymeric material, for optical cross-talk redn. for liq. scintillation counting.

DERWENT CLASS: A89 **J04 S03**
INVENTOR(S): EFFERTZ, B S; KOLB, A J; MANNS, R L
PATENT ASSIGNEE(S): (PACB) PACKARD INSTR CO INC
COUNTRY COUNT: 4
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 571661	A1	19931201	(199348)*	EN	9
R: DE FR GB					
US 5319436	A	19940607	(199422)		8
US 5457527	A	19951010	(199546)		7
EP 571661	B1	19960214	(199611)	EN	11
R: DE FR GB					
DE 69208352	E	19960328	(199618)		

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
EP 571661	A1		EP 1992-119631	19921117
US 5319436	A		US 1992-890030	19920528
US 5457527	A	Cont of	US 1992-890030	19920528
			US 1994-220111	19940330
EP 571661	B1		EP 1992-119631	19921117
DE 69208352	E		DE 1992-608352	19921117
			EP 1992-119631	19921117

FILING DETAILS:

PATENT NO	KIND		PATENT NO
US 5457527	A	Cont of	US 5319436
DE 69208352	E	Based on	EP 571661

PRIORITY APPLN. INFO: US 1992-890030 19920528; US 1994-220111 19940330

AB EP 571661 A UPAB: 19940120
The plate (10) comprises upper plate (11) forming the sidewalls (13) of the sample wells. Sidewalls (13) are opaque so light may not be transmitted between adjacent wells through the sidewalls (13). Lower plate (12) forms the bottom walls (14) of the sample wells.

Lower walls (14) are transparent to allow transmission of light through walls (14). Bands of opaque material are in the lower plate (12) and surround each well to block light transmission between adjacent wells through the lower plate (12).

Also new is sample assay in the **microplate** (10) by detecting light emitted from or transmitted through the sample in each well comprising: (a) placing the samples in the **micro plate** (10), and (b) detecting light emitted from or transmitted through the sample in each separate well.

ADVANTAGE - It may rapidly and efficiently be mfd. Cross talk between adjacent wells is significantly reduced. E.g. when using liq. scintillation counting, liq. crosstalk is eliminated and optical crosstalk

is reduced at 2%-0.2% by the addn. of the non-transmissive bands.
Dwg. 1/7

L117 ANSWER 21 OF 26 WPIX (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1992-062177 [08] WPIX
DOC. NO. NON-CPI: N1992-046840
DOC. NO. CPI: C1992-028707
TITLE: Vacuum packaged test container - used in enzyme immunoassay to prevent conserving soln. used in general clinical tests from leakage and drying.
DERWENT CLASS: B04 D16 **J04 S03**
PATENT ASSIGNEE(S): (WAKA) WAKAMOTO PHARM CO LTD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 04009666	A	19920114	(199208)*		
JP 2814292	B2	19981022	(199847)		4

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2814292	B2	JP 1990-110261	19900427

FILING DETAILS:

PATENT NO	KIND		PATENT NO
JP 2814292	B2	Previous Publ.	JP 04009666

PRIORITY APPLN. INFO: JP 1990-110261 19900427
AB JP 04009666 A UPAB: 19931006
Containers to prevent conserving soln. used in general clinical tests from leakage and drying, are new.

USE/ADVANTAGE - Used in the enzyme immunoassay applied to clinical test medicine, etc. **Micro-plates** used in the enzyme immunoassay have holes having a material (antigen or antibody), which can react with the analytical object, fixed on the surface. The material to be fixed on the surface of hole is sensitive to temp., physical impact, etc., so a conserving soln. including stabiliser is added. To maintain the quality of completed prods., leakage of conserving soln. during transportation and redn. in the amt. of soln. during storage must be prevented. Conventionally, an adhesive tape is bonded to the surface of **micro-plate**. However, since the surface of **micro -plate** is not flat, the adhesive strength is low, and the conserving soln. often leaks during transportation or storage due to temp. difference, etc. Packaging material used generally in packaging of articles such as **polyethylene film**, nylon **film** , Al coating **film**, etc. can be used. The packaging film, is of a bag shape having an opening on one side. After setting a packaging film having a **micro-plate** inserted in a vacuum packaging machine, the inside is evacuated, and, after evacuation, the opening is heat sealed. **Micro-plates** can be sanitarily packaged, and the leakage can be completely prevented.

L117 ANSWER 22 OF 26 CEABA-VTB COPYRIGHT 2002 DECHEMA

ACCESSION NUMBER: 1991(00):0370 CEABA-VTB FILE SEGMENT V
DOCUMENT NUMBER: VTB: 1991(14):54
TITLE: Effect of permeate flux rate on alkaloid production in a novel plant cell **membrane** reactor using coffea arabica cells
Wirkung der Permeat-Durchflussgeschwindigkeit auf die Alkaloidherstellung in einem neuartigen Membranreaktor mit pflanzlichen Zellen von Coffea arabica
AUTHOR: Lang, J.A.; Yoon, K.-H.; Prenosil, J.E. (Swiss Federal Inst. Technol., Zurich, Switzerland)
CORPORATE SOURCE: ETH Zuerich (CH)
SOURCE: Biotechnol. Prog. (1990) 6(6), 447/451, 7 Abb, 15 Qu
CODEN: BIPRET ISSN: 8756-7938
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A novel **membrane** reactor was developed for phytochemical production using plant cells. The **membrane reactor** was a flat **plate** construction, with **polypropylene** sheets with pore sizes of 0.075.mu.m. The effect of permeate flux rate on cell growth, glucose uptake, and alkaloid production was examined. A final alkaloid concentration of 46.1 mgL at a pressure index of 53 was obtained. This pressure index was optimal for cell growth and purine alkaloid formation. The **membrane** reactor system described has the potential to be used in a two-step production process.

L117 ANSWER 23 OF 26 WPIX (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1989-367835 [50] WPIX
DOC. NO. NON-CPI: N1989-279679
DOC. NO. CPI: C1989-163147
TITLE: Low molecular cpd. detection - by immunoassay comprising adsorbing protein on carrier, adding sample and treating with crosslinking agent.
DERWENT CLASS: A96 B04 **J04 S03**
PATENT ASSIGNEE(S): (MITC) MITSUI PETROCHEM IND CO LTD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 01276066	A	19891106	(198950)*		6

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 01276066	A	JP 1988-104283	19880428

PRIORITY APPLN. INFO: JP 1988-104283 19880428
AB JP 01276066 A UPAB: 19930923
The method comprises adsorbing protein on a carrier, adding a sample contg. low mol. cpd. to be detected to it, and treating it with a crosslinking agent.
Pref. protein to be adsorbed on a carrier (e.g. **microtiter** plate, bead, **membrane**, etc. made of **polyester**, polystyrene, nitrocellulose, etc.) is e.g. bovine serum albumin, synthetic polylysine, erythrocyte, etc. By adding a sample contg. low mol. cpd. to it and treating them by a cross-linking agent for crosslinking the protein

and the low mol. cpd., the low mol. cpd. is indirectly bound with the carrier and then immunoassay is carried out to detect or determine the low mol. cpd. by utilizing antibody to the low mol. cpd. separately prepd. Crosslinking agent is e.g. glutaraldehyde.

USE/ADVANTAGE - For detecting and determining various low mol. cpds. e.g. chatecholamine, steroid, antibiotic, antiepileptic, nucleic acid, drug, etc. The determn. of low mol. cpds., which become hapten, can be carried out without using labelled antigen. Also the detecting limit concn. of low mol. cpd. can be improved as the measurement is carried out about the total amt. of object immunologically treated. The method is suitable for automatization.

0/0

L117 ANSWER 24 OF 26 WPIX (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1987-320989 [45] WPIX
DOC. NO. CPI: C1987-136821
TITLE: **Micro-titre** tray above vacuum manifold - drawing fluid through hydrophobic **membranes** at base of each well.
DERWENT CLASS: A89 B04 D16 **J04**
INVENTOR(S): WATKINS, L R
PATENT ASSIGNEE(S): (DIGI-N) DIGITAL DIAGNOSTICS; (WERT-I) WERTZ R K
COUNTRY COUNT: 29
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 8706608	A	19871105	(198745)*	EN	30
RW: AT BE CH DE FR GB IT LU NL OA SE					
W: AU BG BR DK FI HU JP KP KR LK MC MG MW NO RO SD SU					
AU 8773521	A	19871124	(198806)		
US 4777021	A	19881011	(198843)		10
JP 01500958	W	19890406	(198920)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 8706608	A	WO 1987-US908	19870421
US 4777021	A	US 1987-27827	19870319

PRIORITY APPLN. INFO: US 1986-856647 19860425; US 1987-27827 19870319

AB WO 8706608 A UPAB: 19930922
A **microtitre** tray has multiple wells each of 25-100 microl. capacity. The lower surface of each well is formed by a hydrophobic membrane which normally retains liquid in the well. The tray can be placed on a base which includes a vacuum manifold to draw liquid from the well through the membrane. The membranes of adjacent wells are isolated. Pref. the **membrane** is a spun-bonded **polyester** in a sheet of compacted, continuous-filament polyester fibres.

USE/ADVANTAGE - A solid phase is provided in the well for supporting a biological coreactant for bonding with a reaction product resulting from a reagent and sample for use in biochemical or immunological testing of particulate matter.

Free reagents are rapidly separated from bound reagents.

0/4

L117 ANSWER 25 OF 26 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 880185151 JICST-EPlus
TITLE: Preparation of polymer **films** by radical beam.
AUTHOR: INAGAKI NORIHIRO; YAMAMOTO HIROMITSU
CORPORATE SOURCE: Shizuoka Univ., Faculty of Engineering
SOURCE: Nippon Kagakkaishi (Journal of the Chemical Society of Japan, Chemistry and Industrial Chemistry), (1987) no. 11, pp. 2031-2037. Journal Code: F0226B (Fig. 9, Tbl. 3, Ref. 8)
CODEN: NKAKB8; ISSN: 0369-4577
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: Japanese
STATUS: New
AB Radical species were separated from O2, N2 and Ar plasmas formed by the glow discharge at 20kHz frequency, and then used as initiation agents for surface modification and thin **film** formation. The concentration of radicals separated from the plasmas depended on the pressure of the **reaction chamber** as **well** as the distance from the plasma generator. When **polyethylene** sheets were exposed to the radical beams, the surface was modified to be hydrophilic (the surface energy of the modified was ca. 60kN/m). Thin **films** were deposited by exposing stryrene vapor to the radicals. However the polymer deposition rate was retarded to a quarter compared with that by exposure to plasma. The chemical composition of the polymer was fairly different from that of plasma polymers from styrene but similar to conventionally polymerized polystyrene. This result suggests that a less degraded polymer **films**, especially with less degradation in the phenyl group, could be formed by the radical beam compared with plasma polymerization.(author abst.)

L117 ANSWER 26 OF 26 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 860491546 JICST-EPlus
TITLE: Abnormal chemotaxis of polymorphonuclear leucocytes and macrophages in rats with experimentally induced diabetes.
AUTHOR: TSUKAMOTO YOSHIO; TAKAYAMA AKINORI; MORI CHIEKO; MORIKAWA YUTAKA; FUJIMOTO HEIZO; MORI MASAKAZU
CORPORATE SOURCE: Osaka Dental Univ.
SOURCE: Shika Kiso Igakkai Zasshi (Japanese Journal of Oral Biology), (1986) vol. 28, no. 2, pp. 132-142. Journal Code: Y0018A (Fig. 8, Ref. 36)
ISSN: 0385-0137
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: Japanese
STATUS: New
AB Experimental diabetes was induced in rats by the injection of streptozotocin. Peritoneal polymorphonuclear leucocytes (PMNLs) and macrophages were induced by i.p. injection to diabetic and normal rats with glycogen and chemotaxis assay was performed in **multi-well** chemotaxis **chambers** with **polycarbonate membrane** filters. Sera of diabetic and normal rats were activated as a chemoattractant with E. coli lipopolysaccharide. Although both PMNLs of diabetic and normal rats migrated to activated serum obtained from a normal rat, significantly lower levels of chemotactic responses were detected in PMNLs of diabetic rats. In the kinetics of serum elaboration of PMNL chemotactic activity, migration of PMNLs from normal rats

continued to increase throughout the 60 min incubation period and reduced in next 30 min. However, PMNLs of diabetic rats migrated similarly within the first 45 min and decreased from 60 to 90 min after stimulation. And same results were obtained in the experiments with serum from a diabetic rat as the chemoattractant. In case of the kinetic experiment of macrophage chemotactic activity elaborated by serum, no significant difference was detected in the macrophage migration from normal rats and diabetic rats within 90 min after stimulation. Although, from 90 to 105 mins, migration of macrophages obtained from normal rats remained relatively constant, continuous and significant increase was observed in macrophages from diabetic rats. When the serum from a diabetic rat was used as the chemoattractant, the same results were obtained. In conclusion, the leucocyte chemotactic responses were abnormal in diabetic rats, and this abnormal function was not induced by diabetic serum. Thus, it seems that the abnormality of the leucocyte chemotaxis may play a role in the decreased resistance to infections in diabetes.(author abst.)

FILE 'HOME' ENTERED AT 12:05:11 ON 03 JUL 2002